



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/098,688	03/15/2002	Shunpei Yamazaki	SEL 308	5173

7590 03/29/2005

COOK, ALEX, MCFARRON, MANZO,
CUMMINGS & MEHLER, LTD.
Suite 2850
200 West Adams St.
Chicago, IL 60606

EXAMINER

CHEN, BRET P

ART UNIT	PAPER NUMBER
----------	--------------

1762

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/098,688

Applicant(s)

YAMAZAKI ET AL.

Examiner

B. Chen

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 46-110 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 46-110 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Art Unit: 1762

DETAILED ACTION

Claims 46-110 are pending in this application. Amended claims 46, 50, 54, 81-94; canceled claims 1-45; and newly added claims 95-110 are noted. It should be noted that claims 104-107 (second occurrence) are renumbered to claims 107-110 under Rule 1.126.

The amendment dated 12/17/04 has been entered and carefully considered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 46-57, 74-76, 81-83, 88-110 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 46, the limitation of “so that the gas is provided to the substrate from a upside of a surface of the substrate while circulating the gas from the downstream side” is deemed new matter as there appears to be no support for such a limitation in the original specification. It should be noted that Figure 1 does not disclose this feature. The same issue is applied to claims 47-49, 74, 81, 88, 95-97.

In claim 50, the limitation of “the heat generating means is covered with said heat absorber” is deemed new matter as there appears to be no support for such a limitation in the

Art Unit: 1762

original specification. It is noted that the absorber is discussed on p.5 lines 4-8 and p.24 lines 2-11 but not the newly added limitation. The same issue is applied to claims 51-53, 75, 82, 89, 95, 98, 105 as well as claims 54-57, 76, 83, 90, 96, 99, 106.

In claim 88, the limitation of the gas flowing “through pores of an orifice plate over the substrate” is deemed new matter as there appears to be no support for such a limitation in the original specification. It is noted that there is mention of orifice plates 1106 and 1107 on pp.14-15 but no support for the claimed limitations. The same issue applies to 89-94.

In claim 97, the limitation of “sheet processing” is deemed new matter as there appears to be no support for such a limitation in the original specification. There is support for the size of the substrates (pp. 19-20) and the number of substrates (p.25 lines 7-11) but there is no mention of sheet processing. The same issue applies to claims 98-103.

In claim 104, the limitation of the “circulating gas from the downstream side of the reaction chamber to the upstream side is heated by a heater which is different from said heat treatment means” is deemed new matter. The examiner is unable to find such a limitation in the original specification. The same issue applies to claims 105-110.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 46-57, 74-76, 81-83, 88-90, 95-99, 104-106 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hemsath et al. (5,997,286) for the reasons listed in the previous office action.

Allowable Subject Matter

Claims 58-73, 77-80, 84-87 are allowed. It should be noted that the allowability of claims 91-94 have been withdrawn due to the new matter rejection above.

Response to Arguments

Applicant's arguments filed 12/17/04 have been fully considered but they are not persuasive.

Applicant first argues that Hemsath fails to teach providing a gas from an upside of a surface of the substrate (p.15 lines 14-17).

The examiner disagrees. It is noted that the recirculation plenum injects gas at the upstream end (col.8 lines 9-17).

Applicant next argues that Hemsath fails to teach a heat generating means covered with a heat absorber (col.15 lines 18-21).

The examiner disagrees. This limitation is taught in col.8 lines 18-36.

Applicant next argues that the reference fails to teach nitrogen and rare gases, a perpendicular flow, and an orifice plate (p.16 lines 1-8).

The examiner agrees in part. While the reference remains silent on nitrogen, it is noted that the claimed method can be used for any appropriate gas as noted in col.8 lines 37-57. With respect to the flow and orifice plate, these limitations are taught in Figure 10 and col.9 lines 17-54, respectively.

Applicant's arguments have been considered but are not deemed persuasive.

Art Unit: 1762

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to B. Chen whose telephone number is (571) 272-1417. The examiner can normally be reached on 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bc
3/20/05


BRET CHEN
PRIMARY EXAMINER